

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1280-06
<b>FROM</b>	Dianne Theriault	<b>SHIFT:</b>	0730 to 1730
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	12 <sup>th</sup> March, 2009		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>BTD-0006</b>

**SUBJECT: 11<sup>th</sup> March, 2009, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Benzol Tank Demolition  
FINAL REPORT**

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Attached is a summary of Real-time particulate (as PM<sub>10</sub>) results for air monitoring performed on the 11<sup>th</sup> of March, 2009. Colin MacIsaac and Reg Peters, of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly sunny, cloudy periods
- Temperature: approximately 1°C
- Wind Direction: East to Southwest

**Comments:** *ALL-TECH was on-Site at 0730 hours and sampling began as soon as there was site activity. Air monitoring was performed during Nova Scotia Lands' construction activities.*

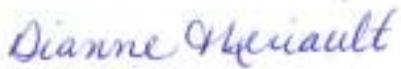
All downwind and upwind measurements of PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

All downwind and upwind measurements of Total Volatile Organic Compounds (TVOC) were below the established Site Action Level for this parameter of 0.66 ppm. Each measurement is the average of a 15 minute sample. A minimum of 2 samples were taken downwind and 1 sample upwind every hour. All measurements were found to be below the detection limit of the instrument. Levels above detection limit will be noted in the table below.

Due to operational criteria, during periods of precipitation (snow and rain) and high humidity, TVOC sampling is halted and resumes after the precipitation has ended.

This report has been prepared by Colin MacIsaac and reviewed by Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



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Dianne Theriault, B.Tech  
Environmental Technologist  
**ALL-TECH Environmental Services Cape Breton Ltd.**

Copied via e-mail:

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**Real-time Airborne PM<sub>10</sub> Concentration Results**  
**Sydney Tar Ponds Agency – Benzol Tank Demolition**  
**11<sup>th</sup> March, 2009**

<b>Sample No. &amp; Air Monitoring Location</b>	<b>Time of Day</b>	<b>PM<sub>10</sub> Action Level (µg/m<sup>3</sup>)</b>	<b>Average Result (µg/m<sup>3</sup>)</b>	<b>Wind Direction</b>	<b>Relative Position</b>	<b>Description of Activity</b>	<b>Observations that may affect sample</b>
1 40m Northeast of Coke Ovens Main Gate	0800	155	26	East	Upwind	Background	No observations seen to affect sampling integrity
2 50m North of South end of Victoria Road Bridge	0800	155	24	East	Downwind	Machine moving material	No observations seen to affect sampling integrity
3 50m North of South end of Victoria Road Bridge	0830	155	24	East	Downwind	Machine moving material	No observations seen to affect sampling integrity
4 40m Northeast of Coke Ovens Main Gate	0900	155	23	East	Upwind	Background	No observations seen to affect sampling integrity
5 50m North of South end of Victoria Road Bridge	0900	155	27	East	Downwind	Machine moving material	No observations seen to affect sampling integrity
6 50m North of South end of Victoria Road Bridge	0915	155	26	East	Downwind	Machine moving material	No observations seen to affect sampling integrity

<b>Sample No. &amp; Air Monitoring Location</b>	<b>Time of Day</b>	<b>PM<sub>10</sub> Action Level (µg/m<sup>3</sup>)</b>	<b>Average Result (µg/m<sup>3</sup>)</b>	<b>Wind Direction</b>	<b>Relative Position</b>	<b>Description of Activity</b>	<b>Observations that may affect sample</b>
7 40m Northeast of South end of Victoria Road Bridge	1000	155	16	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 20m West of Coke Ovens Brook Gate	1005	155	8	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
9 20m West of Coke Ovens Brook Gate	1040	155	7	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
10 40m Northeast of South end of Victoria Road Bridge	1100	155	21	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 20m West of Coke Ovens Brook Gate	1100	155	6	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
12 20m West of Coke Ovens Brook Gate	1145	155	6	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
13 40m Northeast of South end of Victoria Road Bridge	1200	155	25	Southwest	Upwind	Background	No observations seen to affect sampling integrity

<b>Sample No. &amp; Air Monitoring Location</b>	<b>Time of Day</b>	<b>PM<sub>10</sub> Action Level (µg/m<sup>3</sup>)</b>	<b>Average Result (µg/m<sup>3</sup>)</b>	<b>Wind Direction</b>	<b>Relative Position</b>	<b>Description of Activity</b>	<b>Observations that may affect sample</b>
14 20m West of Coke Ovens Brook Gate	1200	155	7	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
15 20m West of Coke Ovens Brook Gate	1235	155	6	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 40m Northeast of South end of Victoria Road Bridge	1300	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 20m West of Coke Ovens Brook Gate	1300	155	6	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
18 20m West of Coke Ovens Brook Gate	1345	155	6	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
19 40m Northeast of South end of Victoria Road Bridge	1400	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 20m West of Coke Ovens Brook Gate	1400	155	6	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
21 20m West of Coke Ovens Brook Gate	1440	155	6	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
22 40m Northeast of South end of Victoria Road Bridge	1500	155	18	Southwest	Upwind	Background	No observations seen to affect sampling integrity
23 20m West of Coke Ovens Brook Gate	1500	155	6	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
24 20m West of Coke Ovens Brook Gate	1545	155	6	Southwest	Downwind	Machine moving material	No observations seen to affect sampling integrity
25 40m Northeast of South end of Victoria Road Bridge	1600	155	14	Southwest	Upwind	Background	No observations seen to affect sampling integrity
26 20m West of Coke Ovens Brook Gate	1600	155	5	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
27 20m West of Coke Ovens Brook Gate	1645	155	5	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity

**Notes: Air sample duration for each monitoring event was 15 minutes.**

### Comparison of Downwind Daily Results for Dust Budget

Location	Duration	Dust Budget Value ( $\mu\text{g}/\text{m}^3$ )	Dust Budget Exceedance Value ( $\mu\text{g}/\text{m}^3$ )
50m North of South end of Victoria Road Bridge	0800 to 0859	24	990
50m North of South end of Victoria Road Bridge	0900 to 0959	51	990
20m West of Coke Ovens Brook Gate	1000 to 1059	59	990
20m West of Coke Ovens Brook Gate	1100 to 1159	65	990
20m West of Coke Ovens Brook Gate	1200 to 1259	72	990
20m West of Coke Ovens Brook Gate	1300 to 1359	78	990
20m West of Coke Ovens Brook Gate	1400 to 1459	84	990
20m West of Coke Ovens Brook Gate	1500 to 1559	90	990
20m West of Coke Ovens Brook Gate	1600 to 1659	95	990

### VOC Monitoring

Monitoring Method	Yes	No
Sustained Odours Observed		•
P.I.D. Required	•	